Gretchen North: Short Bio for Biological Sciences Advisory Committee, 11 December 2017

After receiving my PhD from UCLA and working as a postdoctoral associate there, I joined the Biology Department at Occidental College, where I have taught and done research with undergraduates since 1998. The principal question I have investigated is how plants take up and use water, particularly in stressful habitats such as hot deserts and dry shrub lands. As a plant physiological ecologist, I am interested and experienced in measuring plant responses to the environment at multiple scales, from molecular to ecosystem levels. My primary research contribution to the field has been in plant hydraulics, work that has produced a number of highly cited papers and that has received repeated NSF funding. Recently, I have entered into collaborations to examine the role of the soil microbiome for desert species and to assess photosynthetic efficiency from the leaf to canopy to global scales using solar-induced fluorescence. In addition to being an active reviewer for NSF, USDA, and many international journals, I have been on the editorial boards of *Plant, Cell & Environment* and *Plant and Soil*, and I have served on several NSF panels as well as on an NSF Committee of Visitors. I am a member of several professional societies and have served as Secretary and co-President of the Physiological Ecology section of the Ecological Society of America. Last year, I was elected President of the Faculty Council at Occidental College. What has been most gratifying to me in my career, and what informs the perspective I bring to the NSF Biological Sciences Advisory Committee, is my work alongside a diverse group of undergraduate researchers in the laboratory and in the field. Many of them have been my coauthors on publications and presentations, many have gone on to graduate school or professional school in STEM fields, and all have learned something of the inner workings of biology.